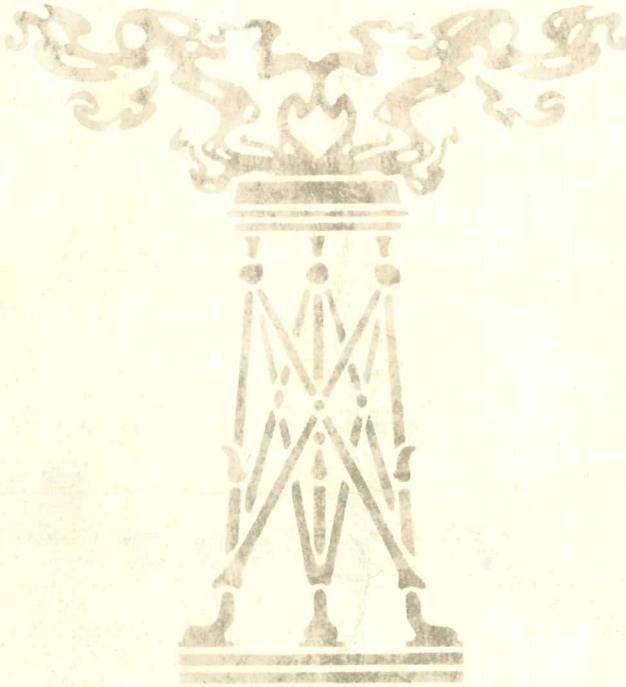


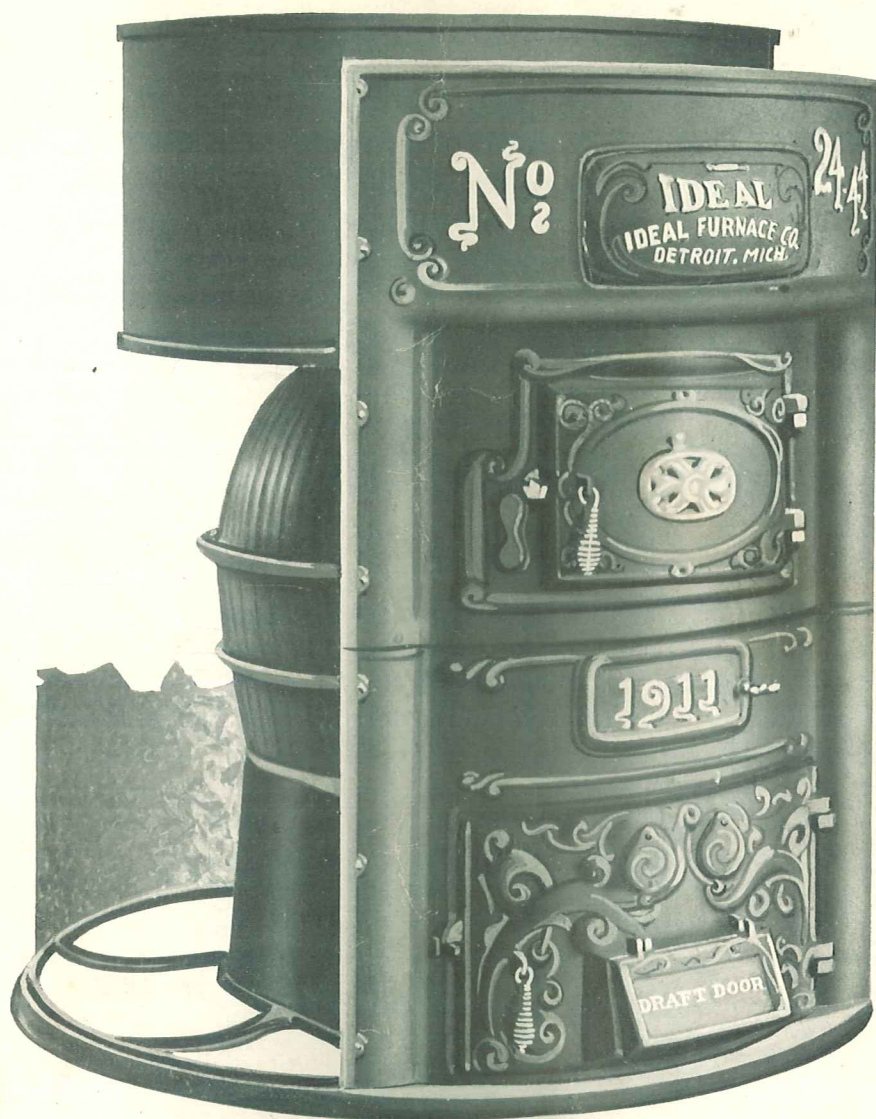
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IDEAL FURNACES



IDEAL FURNACE CO
D E T R O I T



Ideal

Series 20

Sizes and Dimensions

No.	Diam. Fire Pot	Diam. Casing	Depth Radiator	Height Castings	List Price	Shipping Weight	Capacity Cu. Ft.
20	20	36	13	48	\$ 98	700	8,000
22	22	40	16	52	115	850	15,000
24	24	44	17	53	130	1000	20,000
26	26	48	17	54	160	1250	25,000
28	28	54	19	57	200	1500	35,000
30	30	58	20	58	240	1700	50,000

Ideal Furnaces

OUR customers know that we spare no trouble or expense to keep the standard of Ideal furnaces high. Our goods have made us many friends throughout the country, and to these we extend our thanks for past favors and assure them they will find the Ideal continuing to lead among high grade heaters. We shall always guarantee you the highest standard of efficiency known to the science of heating—the best heating apparatus obtainable regardless of price.

Every claim that we make for Ideal furnaces is backed up by actual experience in operation. Our furnace castings are all made from a special mixture of high grade northern ore that insures the most durable castings known. Repair orders are practically unknown to us. The agencies for Ideal furnaces are placed with responsible and competent dealers only and we authorize them to publish freely our guarantee. We stand back of every Ideal furnace that leaves our plant that is placed under proper working conditions. Every detail of construction from base to dome is the result of careful study and wide experience. Competition does not bother Ideal agents as the distinctive features embodied in our furnaces remove them from the competitive class.

On the opposite page is illustrated a powerful yet economical furnace of standard type, built especially for first-class residence work. This series has a heavy cast iron dome immediately over the fire, made extra strong to withstand the intense heat, and deeply corrugated to add to the radiating surface. The radiator is constructed of heavy steel plate and the combustion forced to travel completely around it. Our Ideal radiator has considerable more heating surface than is usually found in furnaces of this type, so that with the same sized fire pot a much larger volume of air is warmed.

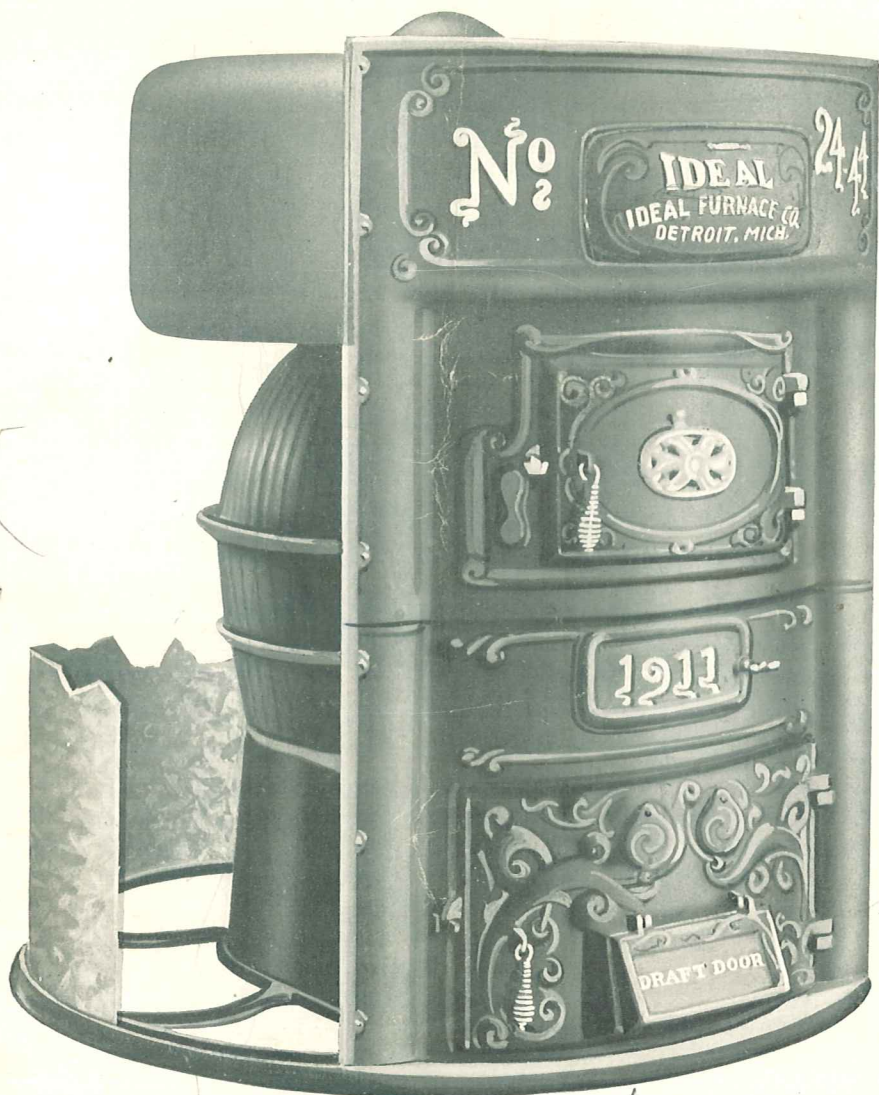
Unusually large air space is provided between the castings of the Ideal furnace and the outside casing. This has the effect of preventing the discharge of over-heated air into the living rooms. The air passages around the radiator are also especially large and result in giving a continuous volume of warm air instead of a small quantity of overheated air. This is an important feature to consider.

All Ideal furnaces are fitted with patented tri-

**Ideal
Furnace
Agencies**

**20
Series**

**Air
Space**




Ideal

Series 300

Sizes and Dimensions

No.	Diam. Fire Pot	Diam. Casting	Height Castings	List Price Cast Raid.	Shipping Weight	Capacity Cu. Ft.
320	20	36	48	\$110	700	8,000
322	22	40	50	130	950	15,000
324	24	44	52	145	1100	20,000
326	26	48	54	180	1350	25,000
328	28	54	56	225	1500	35,000



angular, anti-clinker grates that are practically indestructible. The revolving of the grates in cleaning presents a different surface to the fire each time, making two cooling surfaces to one exposed surface at all times. These grates can be burned out only by allowing the excessive accumulation of ashes underneath. The effect of the revolving of the grates is to cut the ashes from the bottom of the fire and grind up any clinkers. Each bar can be removed separately in a moment's time by a novice and the grates will last a life time if properly used. The life of the grate bars is also insured by the depth of the ash pit which allows for the accumulation of quite a body of ashes before reaching the grates. The large ash pit door makes the removal of ashes easy.

**Anti-
Clinker
Grates**

Where soft coal is used exclusively we recommend our all cast radiator, which is made to withstand the severe action of the cheaper grades of fuel. This is the distinguishing feature of the 300 Series shown on the opposite page. With the exception of the radiator the furnace is the same as our 20 Series shown on the previous page. Extra cleanout doors can be furnished so that the smoke pipe can be taken out in any direction. We can also furnish brick-set fronts at small additional cost.

**Hot
Water
Coils**

All furnaces have special provision for the introduction of water coils for heating water for domestic purposes. These are easily introduced after the furnace is set up and can be made any size, depending on the amount of water to be heated.

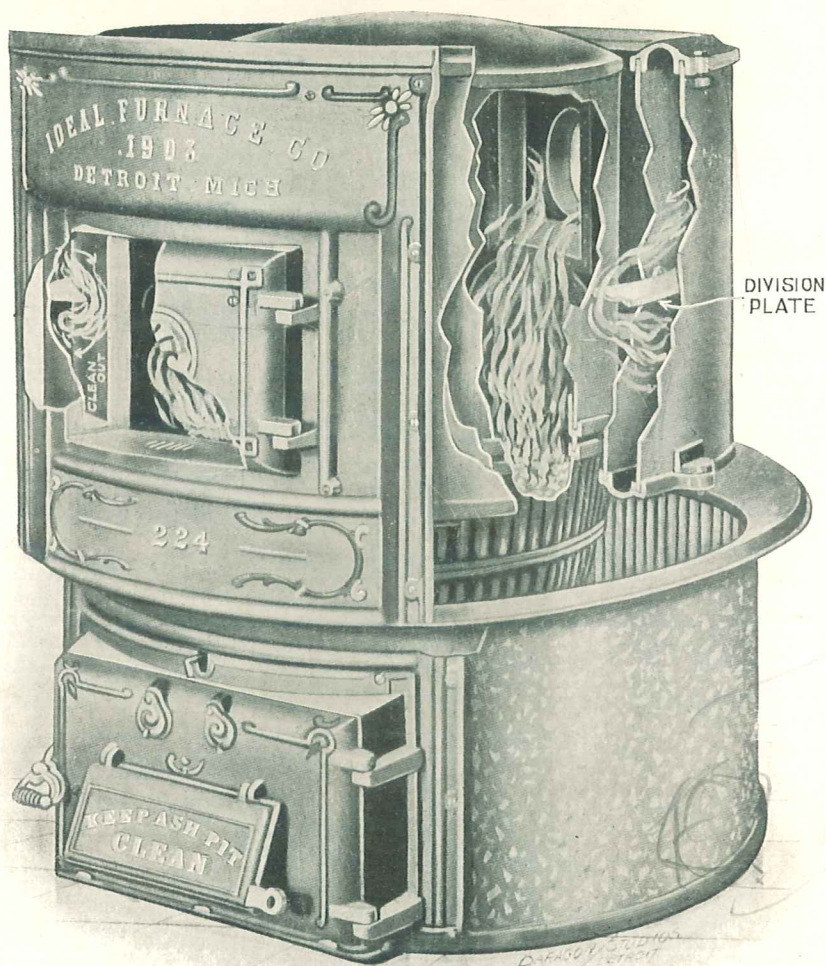
We also desire to call special attention to our Ideal fire pots which are all made in two sections. This construction has been found to be a great advantage in preventing the cracking of the fire pots due to unequal expansion. We guarantee these fire pots under ordinary care for a period of ten years where hard coal is used. They will undoubtedly last twice as long. These fire pots are also deeply corrugated to add to the strength and heating surface.

**Sectional
Fire
Pots**

**Deep
Cup
Joints**

All joints between the different sections of the furnace are deep cup joints which are intended to be packed with asbestos and will effectually prevent the escape of smoke or gas. An Ideal furnace properly set up is absolutely gas tight.

The ornamental fronts used on all our Ideal



Ideal

Series 200

Sizes and
Dimensions

No.	Diam. Fire Pot	Diam. Casing	Depth Radiator	Height Castings	List Price	Shipping Weight	Capacity Cu. Ft.
222	22	44	24	48	\$125	1100	20,000
224	24	48	26	48	150	1250	25,000
228	28	58	28	54	200	1700	40,000



Orna- mental Fronts

furnaces present a handsome and massive appearance, bearing out the general character of the furnace. The operation of Ideal furnaces is a pleasure on account of the quickness with which the fire responds to the drafts and the little care and attention required.

Our 200 Series

Since the introduction, about three years ago, of our 200 Series this furnace has built up a large trade for itself among customers who appreciate the valuable points in furnace construction. It is a new type of furnace whose distinctive feature is its immense radiator, containing a double return flue. There is a longer fire travel in this furnace than in any furnace ever placed on the market. The parts of the radiator exposed to the direct action of the fire are thoroughly protected by cast iron plates and the long fire travel makes is especially economical. The cleanout ports are on each side of the feed door and easily accessible for cleaning. A double fuel door is also provided on this series.

Wood Grates

Special grates for burning wood can be furnished when desired with all furnaces.

Dust Flue

The dust flue which is furnished on all Ideal furnaces connects the ash pit with the dome, effectually carrying away all dust from the ash pit caused by shaking the grates.

Damper System

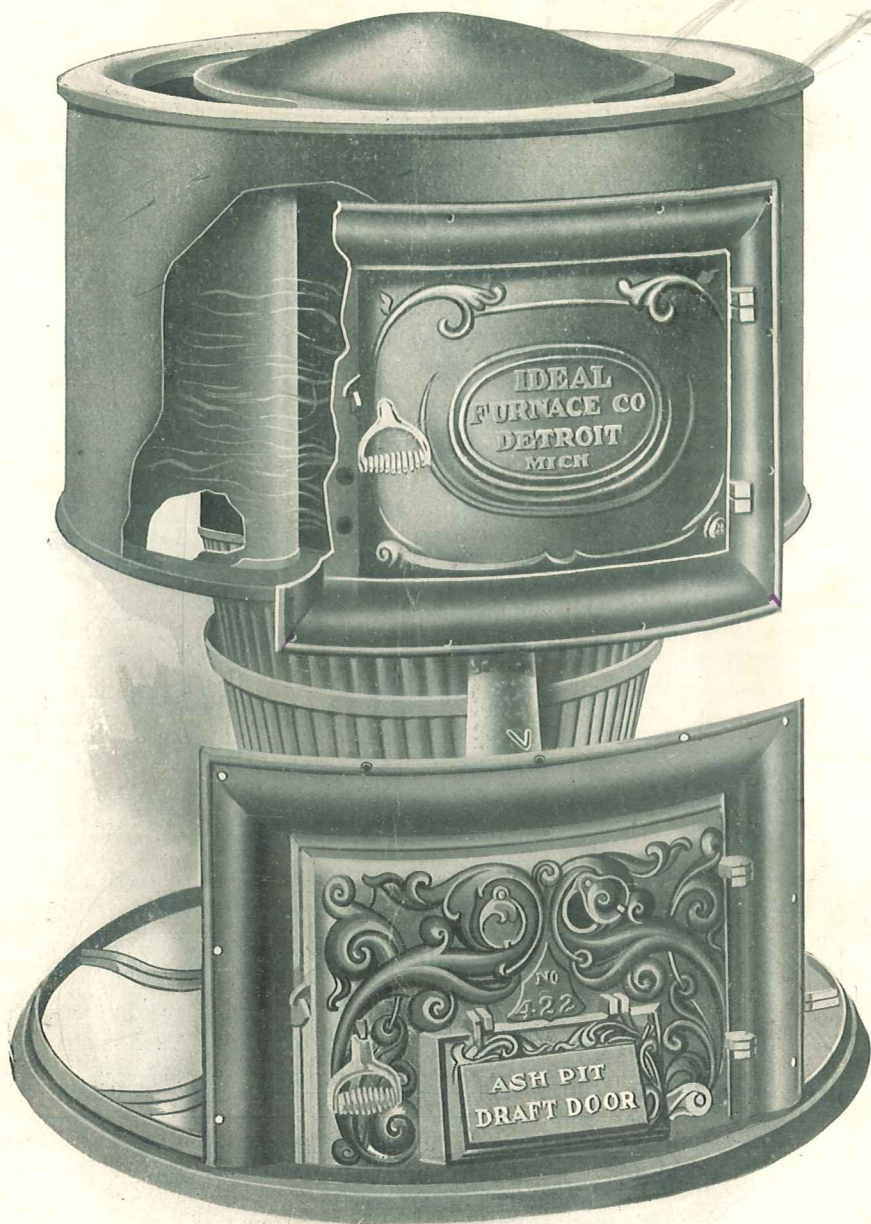
The drafts and dampers are so arranged as to be easily controlled from the living rooms by means of chain regulators, which connect with both the draft door in front and check draft in rear. These chains can be continued to the second floor if desired and drafts controlled from the sleeping rooms. Complaint is quite often made of the dryness of warm air discharged through registers. To overcome this all Ideal furnaces are provided with vapor pans to supply moisture to the air passing through the furnace.

How to Order

If your dealer does not handle the Ideal furnace write us and we will arrange to supply you by shipping through our nearest agent or by quoting you a price direct from our factory. All of our heaters are carefully shipped, each part being numbered and all the extra parts and supplies (fronts, doors, cement, vapor pan, etc.), are well crated.

Care in Shipping

Be sure the railway company delivers to you all that our bill of lading calls for. All casings furnished by us are made double with a half inch air space, and are lined with




Ideal

Series 400

Sizes and Dimensions

No.	Diam. Fire Pot	Diam. Casing	Height Castings	List Price	Shipping Weight	Capacity Cu. Ft.
420	20	40	45	\$105	750	10,000
422 ✓	22	44	47	120	900	16,000
424	24	48	48	140	1050	20,000
428	28	58	54	200	1700	35,000



asbestos paper and corrugated bright tin. List prices do not include casings.

Our 400 Series is fitted with the familiar 'horse-shoe' radiator which has been a favorite with a great many furnace men owing to its heating power and simplicity of construction. It has a deep radiator of great capacity and is very desirable for use in houses having shallow basements and where greater elevation of warm air pipes is desired. It is a very simple furnace to set up and easy to operate. The large space in the combustion dome immediately over the fire insures the proper mixing and burning of the gases, which is a very essential feature. The long travel of the fire produces a maximum heating efficiency with a minimum consumption of fuel.

**Saving
Fuel is
Vital**

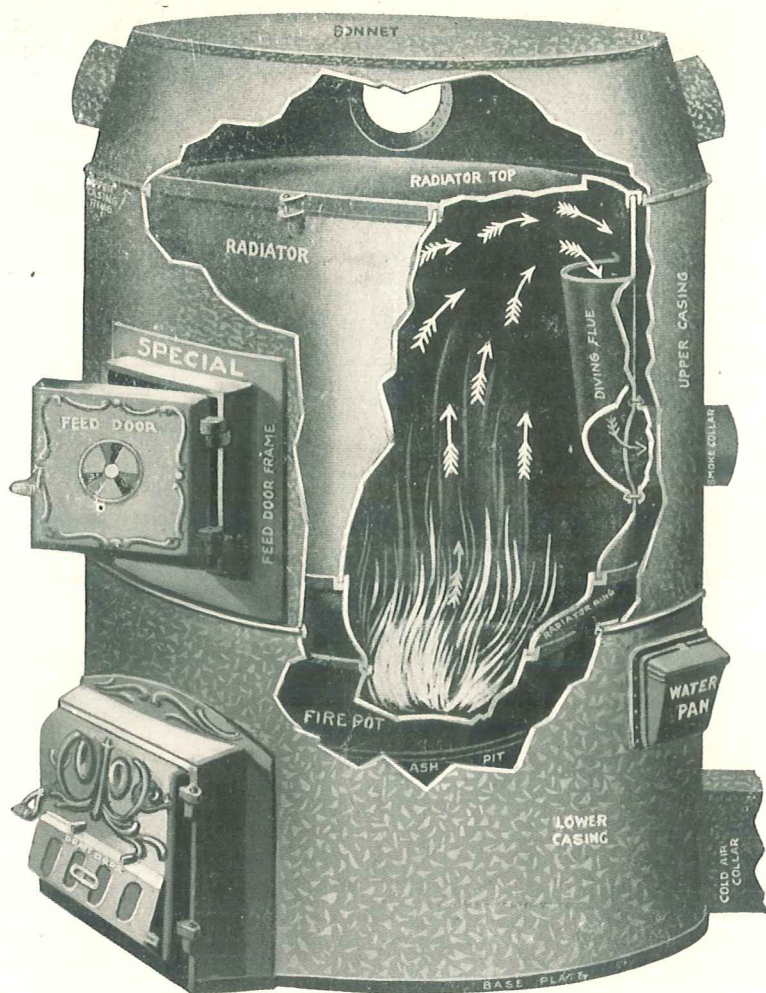
Enough importance has not been attached to the heating problem by the average householder. The long life of a heating apparatus and its yearly consumption of fuel makes the first cost of the apparatus of minor consideration. A furnace like the Ideal, built on scientific lines, will often save its extra cost in one season through its economy in fuel consumption, and we have obtained truly remarkable results along this line. Our constant effort is to give our customers the very best furnace for the most reasonable price.

**Directions for
Setting**

Locate the furnace near the center of the building, favoring the north and west rooms with the shortest pipes. Face the furnace in a convenient direction for feeding. Set the base level on either a brick foundation or a cement bottom. Each joint between the different sections should be thoroughly cemented. The cold air supply can be taken either from inside or outside, depending on conditions, but a supply of both is desirable—two-thirds from inside and one-third from outside. The pipes conveying the outside and inside air should not be joined together but should be taken in at opposite sides of the furnace. More furnace failures arise from improper or insufficient air supply than from any other cause. See that the capacity of the pipes is not reduced at any point. Usually if the lower casing to the furnace is hot the cold air supply is insufficient. Care should be taken to see that the chimney flue is not obstructed and is of sufficient size, not less than 8 x 12. Full directions for operating are furnished with each furnace.

Our 600 Series "Special" Furnace

A Well Made Furnace at a Reasonable Price



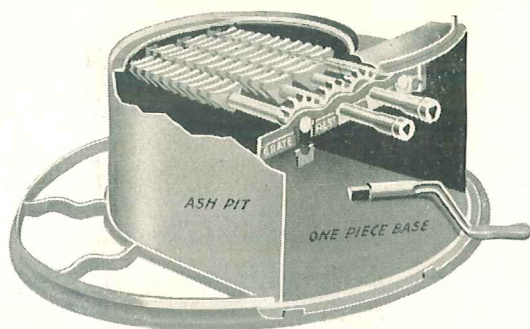
No.	Diameter Fire Pot	Diameter Casing	List Price
18	18	32	\$ 70
20	20	36	80
22	22	40	94
24	24	44	110
26	26	48	135
28	28	54	160
30	30	58	200

Our diving flue furnace is especially adapted for soft coal and wood, and makes a most powerful heater on account of its large radiator. This construction also makes a good heater used with natural gas.

The same grate construction is used as in other series, also the enlarged casings.

The joints of the furnace are gas tight, and steel of a heavy gauge is used for mounting the radiators.

The successful working of any furnace depends largely on the construction of the grate. The cut herewith shown represents our triangular bar grate that in revolving effectively clears the fire and grinds up any clinkers. We cannot recommend this grate too strongly.



This cut shows our gas ring which is used in place of the lower section of the fire pot. Where natural gas is used this ring will be found very desirable. It is placed low down, which makes it convenient in starting a coal fire. The ring is cast in one piece with drilled openings of proper size for any pressure.

CASING MEASUREMENTS

	20	22	24	26	28	420	422	424	428	222	224
Upper Casing.	22x87	24x98	24x107	27x118	30x171	28x125	26x138	28x151	30x180½	30x138	30x151
Lower Casing.	24x87	24x98	24x107	24x118	24x171	17½x90	18x100	18x106	19¼x147	8x100	18x107
Special net price.....	\$5 00	\$5 50	\$6 50	\$7 00	\$8 00	\$5 50	\$6 00	\$7 00	\$9 00	\$6 00	\$7 00
Diameter											
Smoke pipe	7	7	7 or 8	8	8	8	8	8	9	8	8

Casings on 300 series same as 20 series.

Tops or Hoods one-half price complete casing.

Radiant Boilers

General Remarks

In considering the different methods of warming a building so many things can be said in favor of either steam, hot water or warm air, that it is almost impossible to say which is best. A great deal depends on the character of the building, and the uses to which it is put. We have endeavored to make our line so complete that we can satisfy any customer, no matter which system he prefers. With our splendid facilities and the latest improved machinery which we have installed we are prepared to offer the trade a high-grade line of boilers of exceptional efficiency.

Note

The ratings given in the Catalog provide that in estimating the size of the boiler required, all piping mains and risers, flows and returns shall be figured as radiating surface, in addition to the direct radiation to be used, also that the radiation must be proportioned to heat the building to 70 deg. with two column cast iron radiators of standard height; that the boiler is attached to a flue of sufficient draught. They are based on the standard of two pounds pressure at the boiler for steam, and a temperature of 180 deg. F. for water. In estimating the size of the boiler for Direct-Indirect add 25% and for Indirect radiation add 50%. When a pipe coil or cast iron section is introduced into the firepot for the purpose of heating water for domestic use, additional capacity should be figured in determining the size of the boiler, viz.: $1\frac{1}{2}$ sq. ft. of direct radiation for steam and 2 sq. ft. for water for each gallon of water to be heated per hour.

With soft coal a size larger boiler must be used.

Guarantee

Our boilers are guaranteed only to the extent of furnishing new castings for any found defective in manufacture. They are conservatively rated according to the accepted standards, but on account of the varying conditions surrounding their installation, we do not guarantee our boilers except as above.

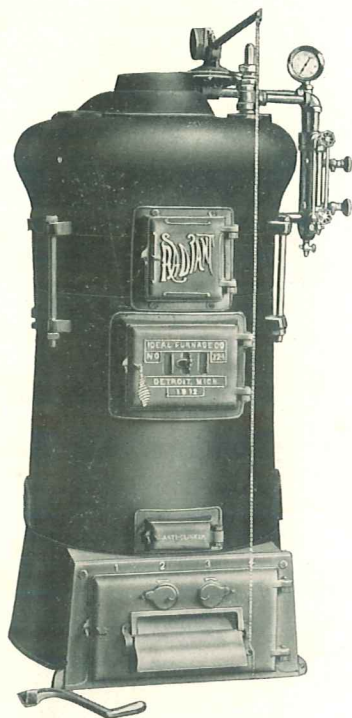
Our aim is to produce the best house-heating boiler that can be manufactured regardless of cost. The boilers shown on the following pages are acknowledged by heating engineers to mark a decided advance in boiler construction. They are made entirely of "cast iron," so constructed as to provide perfect expansion and contraction and the only joints in the boiler are made with heavy lathe-turned cast iron push nipples, *iron to iron*. This is the most perfect joint known to mechanics, and does away with the necessity of packing of threaded nipples.

While burning hard coal and coke exceptionally well, the RADIANT is the only boiler that has ever proved a success with soft coal. This is explained by the presence of the large combustion space over the fire, for the mixing of the gases, that extends the full height of the boiler. We earnestly recommend our RADIANT boiler for all territory where soft coal is used for fuel. In estimating capacities, figure one size larger heater if soft coal is used.

Radiant Boilers

1912 Round Series

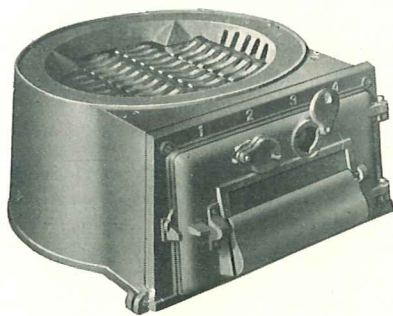
Hard and Soft Coal



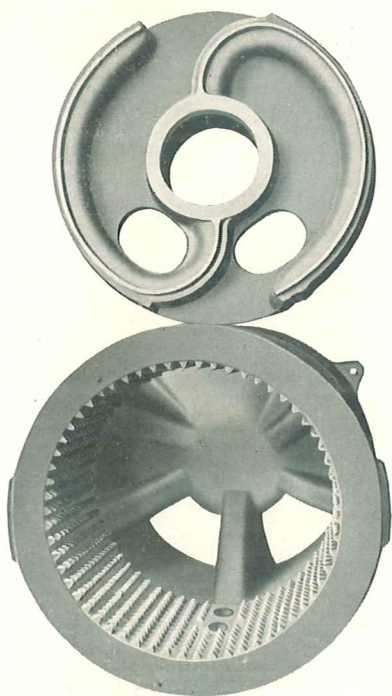
Fire Pot on 1912 Series

This *Fire Pot* is so constructed as to get the very best results with the smallest amount of fuel. From the crown sheet of the fire pot, deep water legs extend down into the heart of the fire and while the fire is entirely surrounded by water the coal is kept away from the chilling surface by a series of pin points extending from the bottom of the pot to and above the top of the fire. These points double the heating surface and are arranged to allow a quantity of air to circulate around the outside edge of the fire and at no time will a ring of ashes form on this outside edge as is generally the case. Corrugated fire pots can be furnished if desired. With a flue of average draft this boiler shows almost perfect combustion.

The ash pit is extra deep and fitted with anti-clinker triangular grates in the hard coal series and with rocking grates in the soft coal series. These triangular grates are so arranged as to be removed separately through the ash pit door. The construction of these grates permit the use of the cheaper grades of fuel.



Ash Pit



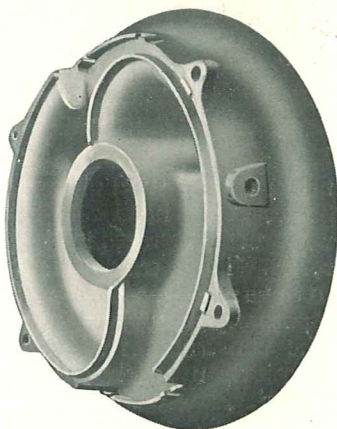
Reference to the cut will show that the *Sections* are designed so that the under side will have almost three times as much surface for the fire to shine on as the top, which is a flat, smooth surface, easy to keep clean through the two clean-out doors which are provided with each boiler, one in front and one opposite in the back.

Steam Dome

The steam boiler has a dome of ample height to store a sufficient amount of dry steam above the water line, to supply its rating, as called for in the tables. The under side of

dome is arranged the same as the intermediate sections with the products of combustion passing through flues in the steam space giving extra dry steam.

The *Water* dome is different from the steam dome in that the bodies of water are cut up more so as to readily absorb the heat units and leave the boiler at the highest temperature possible. There are no packed joints or gaskets used on Radiant Boilers.

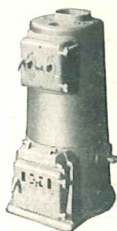


Dimensions and Prices on 1912 Hard Coal Series

No. of Boiler	Diam. Grate Inches	Rating Water	Price Water	Rating Steam	Price Complete with Trimmings	Height to Outlets Inches Steam	Height to Outlets Inches Water
217	17	300	\$120	175	\$115	43	39
317	17	375	130	225	125	48	44
417	17	450	140	275	135	53	49
219	19	550	150	325	150	46	42
319	19	600	158	375	167	51	47
419	19	650	184	425	195	56	52
222	22	775	205	475	215	50	46
322	22	850	217	525	226	55	51
422	22	950	230	575	240	60	56
225	25	925	250	600	260	51	47
325	25	1050	270	650	285	57	53
425	25	1150	290	700	310	63	59
228	28	1250	320	775	340	52	51
328	28	1450	350	900	370	58	57
428	28	1600	380	1000	400	64	63
231	31	1725	420	1050	450	52	51
331	31	2000	460	1275	485	58	57
431	31	2325	500	1350	525	64	63

Radiant Tank Heaters

The RADIANT Cottage and Tank Heaters will produce hot water for domestic purposes at a very little cost, and will meet every requirement for this class of heater.



No. 12

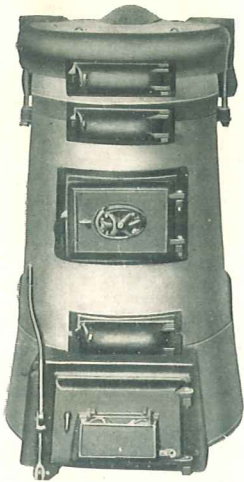


No. 1



No. 6 Laundry

Number	Height	Area Grate	Pipe Connection	Tank Capacity Gals.	Radiation Feet	Price
1	25	10	1 1/4	60	90	\$35
6	30	10	1 1/4	60	90	35
12	36	11	1 1/4	150	120	46
13	41	12	1 1/4	200	150	53



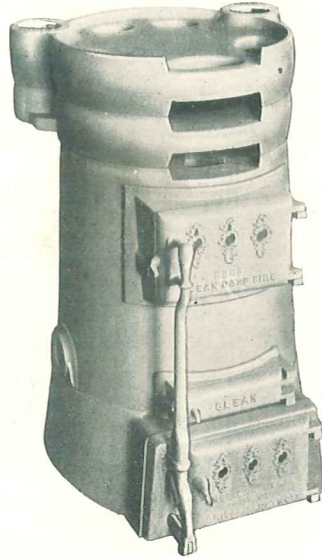
Special Soft Coal Series

This series has larger flue area and is especially designed to use the cheaper grade of fuel. The grate is the rocking and dumping style.

The Fire Pot has extended corrugations that add nearly one-third additional to the heating surface and materially aid combustion. It is also exceptionally deep, permitting a deep, clean, steady fire and providing ample space above the fire for proper combustion. The feed door is large and permits the use of coarse grades of fuel.

The sections above the Fire Pot are horizontal in shape on which the combustion strikes squarely, and in which the flue openings are so staggered as to produce the longest fire travel consistent with proper draft. All surfaces are easily accessible for cleaning. Connections between the different sections are so made as to create a positive circulation within the boiler itself, which, added to the abundant steam space, allows the boiler to maintain a steady water line when used for steam.

One distinctive feature of the RADIANT line is its large proportion of direct fire surface to the grate surface, *i. e.*, practically every foot of boiler surface is exposed to the direct rays of heat from the fuel. A glance at the sectional view will show this.



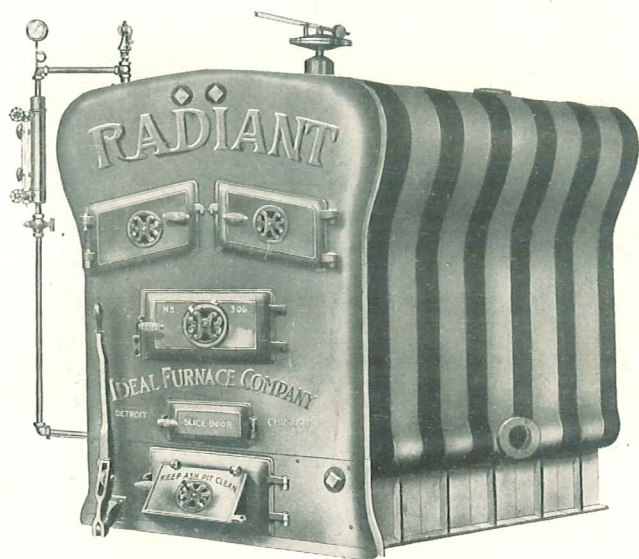
Number	Diameter Grate Ring	Rating Steam	Price	Rating Water	Price
181	18	300	\$150	500	\$145
182	18	350	170	575	160
183	18	400	190	650	180
231	23	450	210	750	200
232	23	500	225	825	215
233	23	550	240	875	230
271	27	600	260	975	250
272	27	700	275	1075	265
273	27	800	300	1150	290

Piping should be figured as Radiation.

1912 Square Series

In our sectional boilers the entire length of the section from the grate line to the dome is exposed to the direct action of the flame, while in ordinary boiler construction all surface above the crown sheet is simply flue surface exposed to what heat there remains in the smoke.

Flue space is provided between each section in such a way as to compel the gases to pass upwards from the fire directly to the top of the boiler, practically superheating the steam and allowing every foot of the section to be exposed to the flame. By this means we bring the greatest heat to bear on the water in the dome at the point where it is leaving for the mains. These openings between the sections extending upward directly over the fire also form a continuation of the combustion chamber, igniting the gases more perfectly. This construction is unequaled as a soft coal burner where a sufficient amount of space above the fire must be provided for the mixing of the gases. Care is taken not to divide the products of combustion into too small currents, thereby reducing what should be hot gases or flame into smoke. This construction,



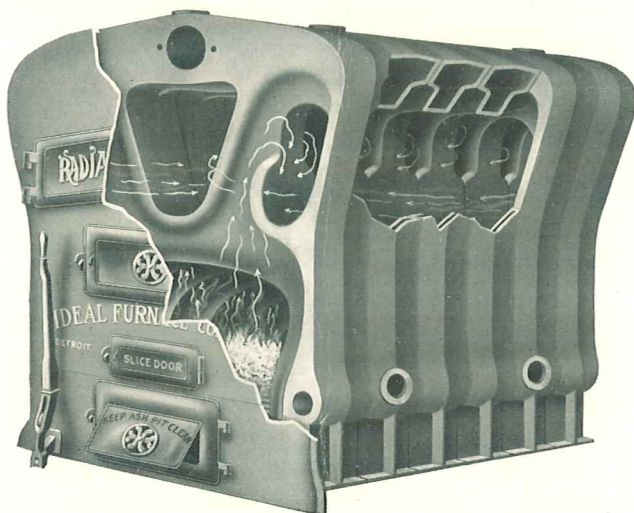
as can be readily seen, makes practically a self-cleaning boiler, a point which adds greatly to its efficiency; in fact, these boilers have been operated with soft coal during a whole season without cleaning or showing any necessity for it. The flues being toward the outside of the boiler cause the fire to burn more brightly around the edge of the fire pot and admit of no dead corners.

The depth of the waterways in the different parts of the boiler is designed especially with view of securing the greatest economy of fuel and quickest circulation of water. The waterways are vertical and so constructed as not to impede circulation, and to allow easy escape for the steam.

We call special attention to the quality of our boiler castings and the machine work on them. RADIANT boilers are made of soft, strong, close iron, every pound of which is melted under the supervision of a practical chemist. The castings are even throughout and of the proper thickness to insure quick transmission of heat, at the same time possessing great strength and durability. All castings are thoroughly cleaned both inside and out, the work being done by the best equipment known.

All nipple openings are bored by a powerful six spindle boring mill, the six holes being bored at one operation to insure absolute accuracy. By this method of machining any additional sections needed in the future can be depended upon to fit properly.

Realizing the importance to the fitter of having a heater that will set up easily and quickly, we have spared no expense in building specially designed equipment for the purpose of mounting and machining the boilers.

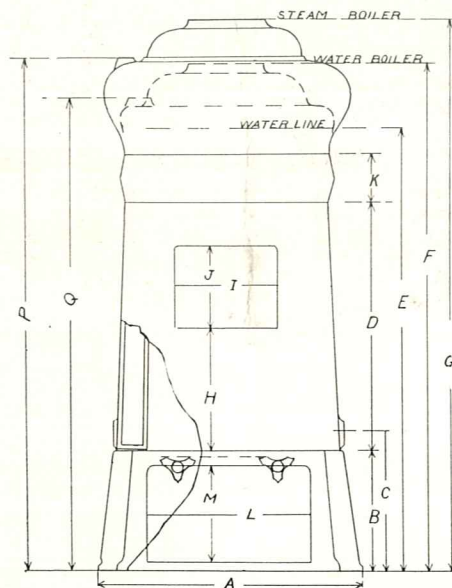


The draft regulators attached to the boilers are automatic and positive in their action, and, with proper firing, the boiler can be operated with comparatively little attention. Special care is taken to see that all doors are closely fitted.

Testing. Every boiler is thoroughly tested under sixty pounds of cold water pressure before leaving the plant, and great care is taken to see that each section of the boiler is absolutely water tight. Each heater is mounted complete before shipping, and subject to thorough inspection. All castings that go to make up RADIANT boilers are guaranteed to be perfect and free from flaws of every kind. Any imperfect sections will be furnished free of charge.

Sizes, Ratings and List Prices—Sectional Boilers

No.	Fire Surface	Rating Water	Price Water	Rating Steam	Price Steam	Foundation Inches	Tappings	Width	Height
274	27x24	1200	310	725	340	42x32	1—4	45	60
275	27x32	1550	365	975	395	42x40	1—4	45	60
276	27x40	1950	440	1225	470	42x48	2—4	45	60
277	27x48	2300	510	1475	540	42x56	2—4	45	60
278	27x56	2600	575	1725	605	42x64	2—4	45	60
304	30x24	1400	350	850	380	45x32	1—4	45	60
305	30x32	1800	415	1150	445	45x40	2—4	45	60
306	30x40	2250	500	1475	530	45x48	2—4	45	60
307	30x48	2700	580	1800	610	45x56	2—4	45	60
308	30x56	3200	670	2100	700	45x64	2—4	45	60
415	41x34	3550	750	2150	775	64x54	1—5	62	72
416	41x42	4425	850	2675	895	64x64	1—5	62	72
417	41x50	5325	1000	3200	1020	64x73	2—5	62	72
418	41x58	6250	1125	3750	1145	64x82	2—5	62	72
419	41x66	7150	1250	4300	1270	64x90	2—5	62	72
475	50x34	4250	875	2600	900	54x72	1—5	72	72
476	50x42	5350	1025	3200	1095	62x72	2—5	72	72
477	50x50	6350	1150	3800	1175	70x72	2—5	72	72
478	50x58	7450	1300	4550	1325	78x72	2—5	72	72
479	50x66	8600	1450	5500	1475	86x72	3—5	72	72
4710	50x72	9700	1575	5900	1600	94x72	3—5	72	72
4711	50x80	10750	1715	6600	1740	102x72	3—5	72	72
4712	50x88	11750	1870	7300	1890	110x72	3—5	72	72



Dimensions

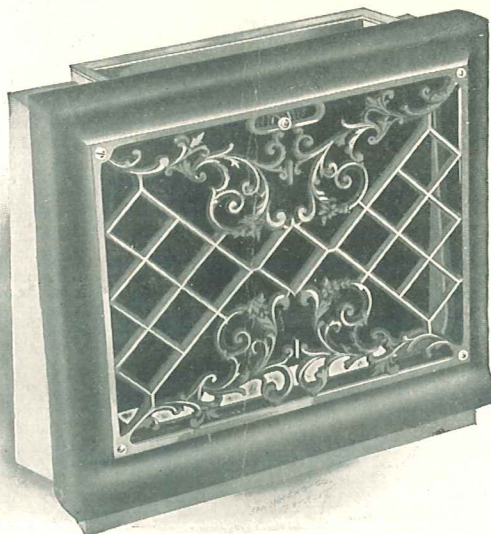
Hard Coal

	A	B	C	D	E	F	G	H	K	P	Q
317	23 $\frac{7}{8}$	11	13	22 $\frac{3}{8}$	41 $\frac{1}{2}$	48 $\frac{3}{8}$	52 $\frac{1}{2}$	14	5	48 $\frac{1}{8}$	44
319	26 $\frac{1}{8}$	12	14 $\frac{1}{2}$	23 $\frac{1}{2}$	43	51 $\frac{1}{2}$	54 $\frac{1}{2}$	15	5	50 $\frac{1}{8}$	47 $\frac{1}{8}$
322	29 $\frac{1}{4}$	13	15 $\frac{1}{4}$	25 $\frac{3}{8}$	48	55 $\frac{5}{8}$	59 $\frac{1}{2}$	17	6	55 $\frac{1}{8}$	51 $\frac{1}{4}$
325	32 $\frac{1}{2}$	13	15 $\frac{1}{4}$	25 $\frac{3}{8}$	48	57 $\frac{1}{2}$	63 $\frac{1}{2}$	17	6	58 $\frac{1}{8}$	53
328	36 $\frac{1}{8}$	13	15 $\frac{1}{2}$	26 $\frac{1}{2}$	50	58	63 $\frac{3}{4}$	17	6	62 $\frac{1}{8}$	57
331	38 $\frac{5}{8}$	13	15 $\frac{1}{2}$	26 $\frac{1}{2}$	50	58	63 $\frac{1}{2}$	17	6	62 $\frac{1}{8}$	57 $\frac{5}{8}$

Detroit Side Wall Registers

To the Trade:

The great success attending the introduction of our Detroit Side Wall Registers prompts us to urge furnace men generally to acquaint themselves with the merits and price of this line before placing their orders. We particularly invite comparisons with other makes in point of appearance, efficiency, simplicity and price.



The Right Register at the Right Price

The above cut represents our first floor construction and is made in five sizes. Our patented wheel movement is simple and cannot get out of order. Easily operated with hand or foot. The design is open and has large air capacity.

Discount

Price List and Dimensions of First Floor Registers

No.	Capacity in floor reg. size	Size Basement Pipe	Size of Boot	Size of Top Collar	List Japan	List Nickel or Oxy. Copper	Safety Box or Boot or Elbow	Single Tin Box	Double Head Box Single
8	8 x 10	8	4½ x 11	None	\$ 2 00	\$ 3 85	\$ 1 75	\$1 10	\$ 1 40
8½	8 x 12	8 or 9	5 x 12	None	2 40	4 35	1 75	1 20	1 50
9	9 x 12	9 or 10	6 x 12½	3½ x 10	3 00	5 00	1 80	1 20	1 60
10	10 x 12	10	6½ x 13¾	3½ x 11	5 10	7 60	2 20	1 50	1 70
12	12 x 14	12	8 x 14	3½ x 11	7 15	12 00	2 40	1 75	2 00

In setting tin box leave bottom of register opening 2 in. above floor on Nos. 10 and 12 and 1½ in. on No. 8 and 9.

Detroit Side Wall Registers

The No. 2 and 3 take the place of the old style Convex Registers.

The shape of the valve increases the velocity of the air and consequently the capacity of the pipe. It also deflects the current of air into the room and thus prevents discoloration of wall. Experience proves that a furnace will discharge more air to a given room with this register than with any other style.

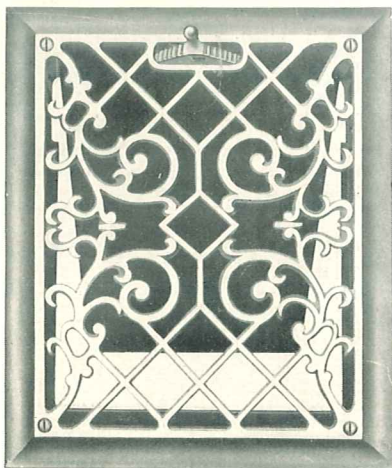


Cut of Style No. 3 for above base and Style No. 30 Base Register



We manufacture everything in heating equipment

Nos. 20 and 30 Second Floor Base Registers



Cut of Style No. 2 for above base and Style No. 20 Base Register.

Size	Black Jap.	White Jap.	Nickel or Oxy. Copper
8 x 10	\$ 2 00	\$ 2 35	\$ 3 85
8 x 12	2 40	2 90	4 35
9 x 12	2 50	3 00	4 40
10 x 12	3 75	4 35	6 00

Sizes and Price List Nos. 2 and 3 for Above Base

Size	Black Jap.	White Jap.	Nickel or Oxy. Copper
8 x 10	\$ 1 65	\$ 2 00	\$ 3 15
8 x 10	1 90	2 30	3 65
9 x 12	2 10	2 55	4 00
10 x 12	2 40	2 90	4 40

Floor Registers—Price List Adopted 1903

Size of Opening	Black Japanned			Electro-Plated—Nickel			Electro-Plated—Brass Bronze or Copper			Wood Faces
	Register	Register Face	Floor Border	Register	Register Face	Floor Border	Register	Register Face	Floor Border	
4x12	\$1 80	\$0 95	\$1 35	\$2 80	\$2 15	\$2 55	\$3 10	\$2 45	\$3 00	List \$1.00 per sq. ft. Special sizes to order
4x15	3 00	1 20	1 90	4 00	2 70	3 40	4 30	3 00	4 00	
6x 8	1 55	1 00	1 15	2 80	2 25	2 40	3 10	2 50	3 00	
8x10	1 65	1 10	1 25	3 15	2 60	2 75	3 85	3 30	3 90	
8x12	1 90	1 30	1 50	3 65	3 05	3 25	4 40	3 75	4 40	
9x12	2 10	1 45	1 65	4 00	3 35	3 55	5 10	4 45	5 00	
10x12	2 40	1 70	1 75	4 40	3 70	3 75	5 50	4 80	5 35	
10x14	3 15	2 20	2 20	5 25	4 00	4 30	6 55	5 60	6 00	
12x12	4 00	2 70	2 70	6 35	5 05	5 05	7 90	6 60	7 10	
12x14	4 35	2 80	2 80	6 85	5 35	5 35	8 25	6 75	7 35	
12x15	4 50	2 90	2 90	7 00	5 40	5 40	8 50	6 90	7 60	
12x15	7 50	4 00	4 00	10 35	6 85	6 85	12 25	8 75	9 25	
14x16	8 50	4 30	4 30	11 50	7 30	7 30	16 50	11 00	11 00	
14x18	9 00	4 50	4 50	12 00	7 50	7 50	18 50	12 00	12 15	
14x20	9 50	4 80	4 80	13 00	8 50	8 50	20 50	13 00	12 75	
14x22	10 50	5 00	5 00	14 50	9 00	9 00	22 50	14 50	13 50	
16x18	12 00	5 30	5 30	16 20	9 50	9 50	22 25	14 25	13 25	
16x20	12 35	6 10	6 10	16 55	10 30	10 30	24 60	16 00	14 00	
16 24	15 00	7 00	7 00	20 00	12 00	12 00	29 60	19 25	17 10	
16x30	27 90	11 00	11 00	35 00	18 25	18 25	37 50	25 00	21 60	
18x21	20 50	7 75	7 75	26 00	13 25	13 25	30 00	20 50	18 00	
18x24	21 50	8 35	8 35	27 75	14 60	14 60	34 25	22 50	18 75	
20x20	19 75	8 00	8 00	24 75	13 00	13 00	32 40	21 80	18 10	
20x24	22 00	8 60	8 60	28 20	14 80	14 80	39 00	25 50	21 70	
20x26	23 50	9 50	9 50	32 00	17 50	17 50	42 00	27 50	22 00	
21x29	29 00	11 60	11 60	40 50	22 20	22 20	52 00	34 00	27 50	
24x24	30 00	12 00	12 00	40 00	22 00	22 00	49 00	32 50	26 00	
24x27	33 95	14 00	14 00	45 00	25 00	25 00	56 00	37 00	29 00	
24x30	38 00	17 25	17 25	50 00	29 25	28 25	62 00	41 50	32 00	
27x27	37 25	17 00	17 00	49 25	29 00	28 00	66 00	44 50	34 00	
27x38	56 00	25 00	25 00	76 00	45 00	36 00	94 00	64 00	46 00	
30x30	49 00	21 50	21 50	65 00	37 00	34 00	85 00	56 00	41 00	
30x36	67 50	28 50	28 50	90 00	51 00	41 00	102 00	70 00	48 00	
36x36	80 00	35 00	29 50	105 00	60 00	54 50	127 00	83 00	66 00	

Net Prices, Furnace Supplies

Ideal Dampers, 8 in., \$1.00; 9 in., \$1.20;	
10 in., \$1.40; 12 in., per doz.	\$1 75
Cast Dampers, Smoke, 7 in., 80c; 8 in., \$1.25;	
9 in., \$1.75; 10 in., per doz.	2 25
Steel Clips, per doz.	60
Steel Clip Tail Pieces, per dozen	05
Pulleys, cased, per doz.	45
Pulleys, open, per doz.	35
Wire Cloth, ½-in. mesh, 36 in. wide, per	
square foot	05
Asbestos Paper, Pure, 50 or 100 lb. rolls, in	
weight 10 lbs. and 14 lbs. to the square, or	
1 lb. and 1½ lbs. to the square yard, market price	
Annealed Wire, 19 gauged, 12 lbs. to stone. .	60
Safety Thimbles, 7 in., 30c; 8 in., 40c; 9 in. .	45
Chain Plates, Nickel.	25
Check Dampers, 7 in., 40c; 8 in., 50c; 9 in.	60

Furnace Cement, 5 or 10 lb. cans, per lb. . .	04
Furnace Cement, 25 lb. cans, per lb.	03½
Chain, Double Jack, No. 14, 12 yds. to box,	
per box	25
Chain, Safety Brass, No. 0, 12 yds to box,	
per box	50
Chain, Safety Nickel, No. —, 12 yds. to box,	
per box	60
Register Pulleys, per pair, fit any register. .	10
Register Cord, per yard	02
Register Indicators, per pair	10
Cold Water Paste, 5 lb. bags, 40c; 10 lb.	
bags, 75c; 50 lb. kegs, per lb.	06
Chimney Thimbles, 7 in., 10c; 8 in., 15c;	
9 in.	20
Furnace Brushes, bristle or wire, each. . . .	75

Price List Round Pipe, Elbows, Casing Collars, Safety Thimbles, Etc.

I. C. TIN	7 in.	8 in.	9 in.	10 in.	12 in.
Pipe per ft.....	\$ 12	\$ 13	\$ 14	\$ 15	\$ 18
Adj. Elbows, 4 Pc. 90°.....	20	22	24	27	40
Adj. Elbows, 3 Pc. 60°.....	18	20	22	25	35
Adj. Angles, 2 Pc. 45° or 22°	10	12	14	15	20

Price List of Floor Boxes.

8x10....	\$0.28	16x20...\$1.30
8x12....	.32	16x24... 1.50
9x12....	.32	18x24... 1.80
10x12....	.36	20x24... 2.00
10x14....	.40	20x26... 2.25
12x15....	.48	21x29... 2.75
14x16....	.90	24x24... 3.25
14x18....	1.00	24x30... 3.75
14x20....	1.10	30x30... 5.00
14x22....	1.20	

Sizes above 12x15 Galv. Iron.

26 Ga. Galvanized Iron	7 in.	8 in.	9 in.	10 in.	12 in.	14 in.	16 in.	18 in.	20 in.	22 in.	24 in.	26 in.
Pipe, per ft., 30 in. length...	18	20	22	24	32	35	40	45	50	60	70	80
Adj. Elbows, 4 Pc. 90° or 3 Pc. 90°.....	30	35	40	50	70	90	1 20	1 50	1 80	2 20	2 60	2 80
Adj. Elbows, 3 Pc. 60°.....	28	32	38	45	60	70	80	1 10	1 45	1 60	1 85	2 00
Adj. Angles, 2 Pc. 45° or 22°	20	24	30	40	45	55	70	80	1 00			
Tees.....	50	60	70	80	1 00							
Casing Collars.....	20	22	25	30	35							
Hot Air Dampers.....	14	18	20	25	30	40						

Price List Double Pipe Fittings

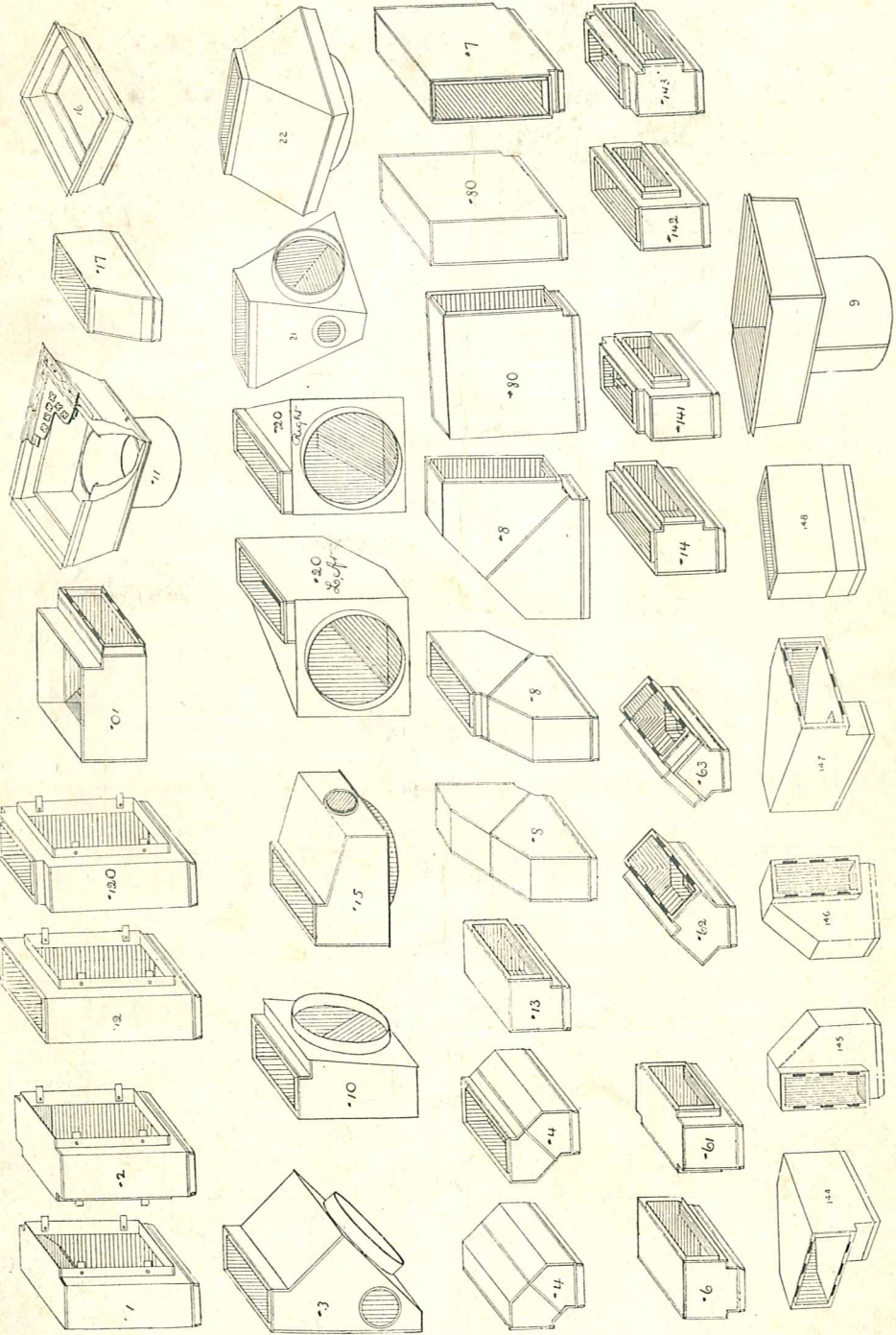
	Size Out side	List per Foot	Foot Pieces	Reverse Foot Pieces	Register Boxes	Register Boxes	Elbows	Tees	Offsets
			Cuts 21 and 22 3, 10 and 15	Cut 20 Right or left	Cut 1 and 2 Through Box Cut 12	Floor Box Cut 01	Two-Piece Cut 4 One Piece Cut 13	Cuts 6 and 7 61-62 63 Through Tee Cut 14 141-142 143	Cuts 8 and 80 144-145 146 and 147
No. 7 Pipe..	3 1/8 x 9 1/2	\$0 50	\$1 20	\$1 40	\$1 20	\$1 45	\$0 90	\$0 90	\$1 20
No. 8 Pipe..	3 1/8 x 12	60	1 25	1 50	1 25	1 50	1 00	1 00	1 25
No. 9 Pipe..	5 x 9	75	1 25	1 50	1 25	1 50	1 00	1 00	1 25
No. 10 Pipe..	5 x 12	85	1 50	2 00	1 50	1 85	1 40	1 40	1 65
No. 11 Pipe..	4 1/2 x 16	1 20	2 40	3 00	2 40	3 00	2 00	2 00	2 50
No. 13 Pipe..	5 1/2 x 14	1 80	1 45	2 00	1 45	1 75	1 25	1 25	1 50
No. 14 Pipe..	5 1/2 x 14	1 00	1 65	2 25	1 65	2 25	1 65	1 65	3 00

Price List of Single Pipe Fittings

No. 107....	3 1/2 x 10	\$0 65	\$0 40	.....	\$0 50	.....	\$0 30	\$0 40	\$0 65	.....
No. 108....	3 1/2 x 12	75	50	.....	55	.....	35	45	75	.....
No. 110....	4 x 12	80	60	.....	70	.....	45	50	75	.....
No. 111....	5 1/2 x 14	1 00	85	.....	1 00	.....	65	75	1 00	.....

Cold Air Shoes

Size.....	12x20	12x26	14x30	16x32
List for Square Pipe.....	\$ 1 35	\$2 00	\$2 50	\$3 00
List for Round Pipe.....	2 40	3 35	3 85	4 35



Styles of Different Fittings with Cut Number